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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,765	07/02/2001	Sergei Nikolaevich Kryukov	1202.021US1	8208
7590 05/19/2004 MARK A. LITMAN & ASSOCIATES, P.A. York Business Center, Suite 205 3209 W. 76th St. Edina, MN 55402			EXAMINER KASSA, YOSEF	
			ART UNIT 2625	PAPER NUMBER 6

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/897,765

Applicant(s)

KRYUKOV ET AL.

Examiner

YOSEF KASSA

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 11-14 and 16, 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fairhurst (U.S. Patent 5,097,322), and further in view of Strolle et al (U.S. Patent 6,246,827).

With regard to claim 1, Fairhurst discloses determining block boundaries (see Fig. 7a-7c); determining an approximate metric of artifact visibility (see col. 4, lines 40-43); adaptively filtering luminance (see col. 4, lines 46-49); adaptively adjusting, i.e., adaptively compensation, local saturation variation (see col. 4, lines 50-54); wherein the adaptive steps are executed to a degree or an amount dependent on the metric of artifact severity (see col. 4, lines 49-56).

Fairhurst does not explicitly call for adaptively simulating high spatial frequency image. However, in the same field of endeavor, strolle et al teaches this feature (see col. 30, lines 13-30). It would have been obvious to incorporate the teaching of strolle et al a luminance signal process system into Fairhurst system. The motivation for doing so is to reducing the amplitude of the high frequency portion of a luminance signal respective to its low frequency portion of the signal.

With regard to claim 2, Fairhurst discloses prior to adaptively filtering luminance, luminance values are interpolated, i.e., signal applied, across block boundaries (see col. 4, lines 40-47).

With regard to claim 3, Fairhurst discloses in conjunction with adaptively filtering luminance, chrominance is adaptively filtered (see col. 5, lines 1-12).

Claims 4, 7, 8, 12-14 are similarly analyzed as claim 3.

Claims 5 and 9 are similarly analyzed as claim 1.

Claim 6 is similarly analyzed as claim 2.

With regard to claim 6, Fairhurst discloses the pixel value comprises luminance texture (see col. 3, lines 50-56).

Claims 11-14 are similarly analyzed as claims 2-4.

With regard to claims 18-23, Fairhurst discloses computer having software and hardware therein that is capable of executing (see fig. 10, that is signal computing process).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 10, 15 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Fairhurst (U.S. Patent 5,097,322).

With regard to claim 10, Fairhurst discloses reducing artifacts in an image previously processed by block transform encoding (see col. 4, lines 40-46), comprising the steps sharpening of existing detail and simulating missing detail by the addition of noise (see col. 6, lines 39-50).

With regard to claim 15, Fairhurst discloses reducing artifacts in an image previously processed by block transform encoding comprising the step of selecting a median filter window based on an assessment of a pixel value according to a variance of a binary mask, i.e., weighted pixel value, (see col. 3, lines 23-34).

Claim 17 is similarly analyzed as claim 15.

#### ***Other Prior Art Cited***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. (5,208,596) to Dieterich disclose DAC distortion compensation.

US Patent No. (5,959,693) to Wu et al disclose pixel adaptive noise reduction filter for digital video.

US Patent No. (4,707,786) to Dehner discloses computer tomography system and method for operation same.

US Patent No. (5,025,312) to Faroudja disclose motion adaptive video noise reduction system...

**Conclusion**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSEF KASSA whose telephone number is (703) 306-5918. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BHAVESH MEHTA can be reached on (703) 308-5246. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communication and (703) 872-9306 for after Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (703) 306-5631. The group receptionist number for TC 2600 is (703) 305-4700.

**PATENT EXAMINER**

Yosef Kassa

05/13/04.



**BHAVESH M. MEHTA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600**